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(71) Applicant (for all designated States except US): COM-  
PAGNE GENERALE DE GEOPHYSIQUE [FR/FR];  
1, rue Louis Migaux, F-91300 Massy (FR).

(72) Inventor; and

(75) Inventor/Applicant (for US only): SILIQI, Risto  
[FR/FR]; 29, rue Saint-André des Arts, F-75006 Paris  
(FR).

(74) Agents: CALLON DE LAMARCK, Jean-Robert et al.;  
Cabinet Régimbeau, 20, rue de Chazelles, F-75847 Paris  
Cédex 17 (FR).

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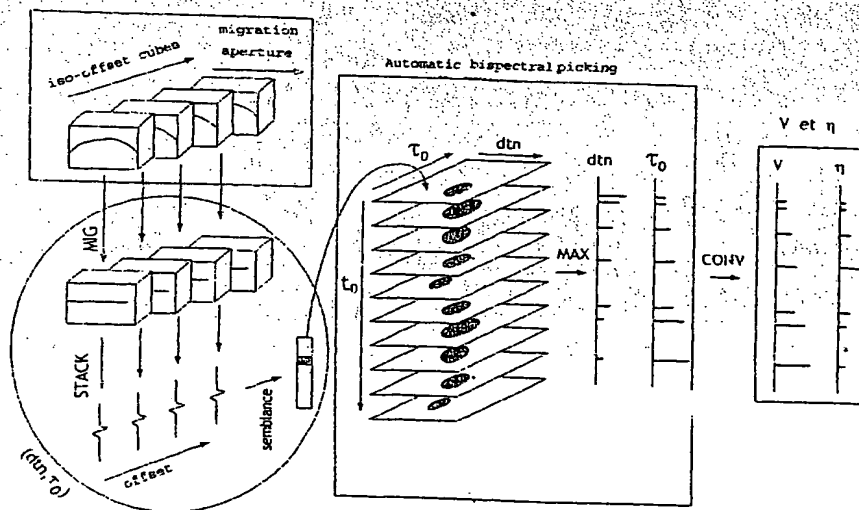
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(54) Title: METHOD FOR BISPECTRAL PICKING OF ANELLIPTICAL NMO CORRECTION PARAMETERS



(57) Abstract: Method of determining the velocity  $V$  and anellipticity  $\eta$  parameters for processing seismic traces in a common midpoint (CMP) gather comprising: - a preliminary step to define a plurality of nodes  $(dtn, \tau_0)$  - for each node  $(dtn, \tau_0)$  defined in the preliminary step, the following steps: - for static NMO correction of traces in the CMP gather as a function of the values of the said parameters  $dtn$  and  $\tau_0$  at the node considered, and calculation of the semblance function associated with the said NMO correction for the node considered; and - for each picked time  $t_0$ , a step including determination of the maximum semblance node  $(dtn(t_0), \tau_0(t_0))$  - and a final step to convert the  $dtn(t_0)$  and  $\tau_0(t_0)$  parameters, so as to obtain the velocity  $(t_0)$  and anellipticity  $\eta(t_0)$  laws.